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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/738,408	12/16/2003	Kirk D. Prall	400.249US01	8316

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EXAMINER	
DIAZ, JOSE R	

ART UNIT	PAPER NUMBER
2815	

DATE MAILED: 12/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/738,408	PRALL ET AL.
	Examiner	Art Unit
	José R. Díaz	2815

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 October 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-112* is/are pending in the application.

4a) Of the above claim(s) *23-112* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 5/28/04, 7/26/04

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Election/Restrictions

➢ Applicant's election without traverse of claims 1-22 in the reply filed on October 20, 2005 is acknowledged.

Claim Rejections - 35 USC § 102

➢ The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

➢ Claims 1-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Lin et al. (US Pat. No. 6,093,606).

Regarding claims 1, 10-11, and 20-22, Lin et al. teaches the steps of: doping a first region (19) of a semiconductor substrate (11) (see Fig. 1E); incising the substrate (see Fig. 1D); doping second regions (D) (see Fig. 1G); disposing respective structures (FG, CG) (see Fig. 1L); and establishing electrical contacts (see Figs. 1L and 3-4).

Regarding claim 2, and 12-13, Lin et al. teaches forming ONO structures (30) and creating gates (CG) on the ONO structures (see Figs. 1L and 4).

Regarding claims 3 and 8, Lin et al. teaches forming ONO structures (30) and creating gates (CG) on the ONO structures (see Figs. 1L and 4), wherein the ONO comprises silicon dioxide /silicon nitride/silicon dioxide layers (see col. 5, lines 13-15).

Regarding claims 4-7 and 14-19, Lin et al. teaches forming a first gate dielectric (22) on the surface edge; forming a floating gate (FG); forming a second gate dielectric (30); and forming a control gate (CG) (see Figs. 1L and 4).

Regarding claim 9, Lin et al. teaches that the semiconductor substrate comprises silicon (see col. 4, line 1).

➢ Claims 1-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Mandelman et al. (US Pat. No. 6,541,815 B1).

Regarding claims 1, 10-11, and 20-22, Mandelman et al. teaches the steps of: doping a first region (24) of a semiconductor substrate (10) (see Fig. 4); incising the substrate (see Fig. 3B); doping second regions (50) (see Fig. 14B); disposing respective structures (30, 44) (see Figs. 11 and 14B); and establishing electrical contacts (see Figs. 1 and Table 1).

Regarding claim 2 and 12-13, Mandelman et al. teaches forming ONO structures (28) and creating gates (30, 44) on the ONO structures (see col. 6, lines 65-66 and Figs. 11 and 14B).

Regarding claims 3 and 8, Mandelman et al. teaches forming ONO structures (28) and creating gates (30, 44) on the ONO structures (see col. 6, lines 65-66 and

Figs. 11 and 14B), wherein the ONO comprises silicon dioxide /silicon nitride/silicon dioxide layers (see col. 6, lines 65-66).

Regarding claims 4-7 and 14-19, Mandelman et al. teaches forming a first gate dielectric (28) on the surface edge; forming a floating gate (30); forming a second gate dielectric (42); and forming a control gate (44) (see Figs. 11 and 14B).

Regarding claim 9, Mandelman et al. teaches that the semiconductor substrate (10) comprises silicon (see col. 3, lines 62-63).

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to José R. Díaz whose telephone number is (571) 272-1727. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Parker can be reached on (571) 272-2298. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

José R. Díaz
Examiner
Art Unit 2815

JEROME JACKSON
PRIMARY EXAMINER